(Red Sea to the Americas). Gulf Coast Research Laboratory, Ocean Springs, Mississippi 39564, U.S.A.

DAY, FRANCIS (1878-88): The fishes of India. William Dawson & Sons. I: 778 pp. II: 198 pls.

HORA, S. L. (1925): Notes on fishes in the Indian Museum. XIII. On certain new and rare species of "Pipe Fish" (Fam. Syngnathidae). *Rec. Ind. Mus. 27*(6): 460-468, pl. xi, text-figs. 4-7.

JAYARAM, K. C. (1981): The freshwater fishes of India, Pakistan, Bangladesh, Burma and Sri Lanka. Ed. Director, Zoological Survey of India, Calcutta: 475 pp., xiii pls.. 208 text-figs.

KULKARNI, C. V. (1953): Native aquarium fishes. — I. *Bull. Bombay Aq. Soc. 1*(1): 8, 9, 1 text-fig.

PANDE, J. N. (1984): Some ecological observations leading to a new source of seed of the freshwater prawn *Macrobrachium rosenbergii* (De Man) in Maharashtra *J. Bombay nat. Hist. Soc. 81*(2): 489-493, 2 text-figs. 1 map.

PRASHAD, B. & MUKERJI, D. D. (1929): The fish of the Indawygi Lake and the streams of the Myitkyina District (Upper Burma). *Rec. Ind. Mus. 31*: 161-223, pls. vii-x, text-figs. 1-10.

RAHMAN, A. K. ATAUR (1976): The freshwater pipefishes of Bangladesh, with the description of a new species. *Bangladesh J. Zool. 4*(2): 43-50, text-figs. 1-3.

WEBER, MAX & DE BEAUFORT, L. F. (1922): The fishes of the Indo-Australian Archipelago. Vol. 4.

28. *NEMIPTERUS PERONII* (VALENCIENNES 1830) (PISCES: NEMIPTERIDAE) — A NEW RECORD FROM INDIAN WATERS

(With a text-figure)

Thread fin breams of the genus *Nemipterus* constitute a commercially important fishery along the Indian coast. The species are chiefly caught by trawl nets, occasionally by hand lines and hooks and lines. Of the twenty species of the genus recorded from the Indo-Australian Archipelago (Weber & de Beaufort 1936), only five are reported from the Indian seas by Day (1878) under the generic name of *Synagris*. They are *S. striatus* (=*N. nematophorus*), *S. tolu, S. bleekeri, S. notatus* (=*N. hexodon*) and *S. japonicus*. Later, *Nemipterus mesoprion* and *N. delagoae* were also recorded from Indian waters (Sriramachandra Murthy 1978, Rajagopalan *et al.* 1977; Srinivasa Rao & Manikyala Rao *in press*).

Twenty specimens of *Nemipterus peronii* were collected from the hand line catches obtained from the northern fishing grounds off Tuticorin (8°48′N 78°11′E) on 22-1-1980. Hitherto, the species was recorded from the coasts bordering South China Sea (Weber & de Beaufort 1936, Wongratana 1970, Senta & Tan 1975, Weber & Jothy 1977) and Pakistan (Supanovic & Mohiuddin 1973) only. The occurrence of *N. peronii* off Tuticorin establishes the continuity of the geographical distribution of the species, which extends from South China Sea to Western Indian Ocean (Arabian Sea). A comparison of the characters of the species from the three areas, namely Tuticorin, Thailand (Wongratana 1970) and Batavia and Celebes (Weber & de Beaufort 1936) is made to find out whether or not there is any geographical gradation in the characters.

Nemipterus peronii (Valenciennes)
(Fig. 1)

Dentex peronii Valenciennes, in Cuvier & Valenciennes, Hist. Nat. Poissons, VI, 1830, p. 245.

Synagris peronii Gunther, Cat. Brit. Mus., I, 1859, p. 376.

Dentex hypselognathus Bleeker, Versl. Akad. Amsterdam, XIII, (1872) 1873, Revision Dentex, p. 9; Atlas Ichth., VIII, 1876-1877, p. 84,

Synagris hypselognathus Weber, Sibogan Exp. Fische, 1913, p. 282.
Nemipterus robustus Ogilby, Proc. Roy. Soc. Qleensland, XXVIII, 1916, p. 114.
Nemipterus hypselognathus Herre, Notes Fish. Zool. Mus. Stanford Univ., 1931, p. 55.
Nemipterus peronii Weber & de Beaufort, Fisches Indo-Australian Archip., 1936, p. 357; Munro, Fishes New Guinea, 1967, p. 312.

Description: Size range — 15.6 to 20.8 cm SL D X, 9; A III, 7; Pi, 15-16; V I, 5; C 16-17; L. l. 47-49; L. Tr. 4/12; GR 6

line, when produced, reaches the anterior part of the dorsal fin. Preopercular flange naked, its hind border entire without serrations. A flat, weak opercular spine present.

Mouth slightly oblique, both jaws equal. Maxilla 2.6-2.9 (2.7) in HL, almost reaches anterior margin of eye. Narrow bands of small pointed teeth in both jaws, with an outer row of caninoid teeth and six canines in each jaw in front.

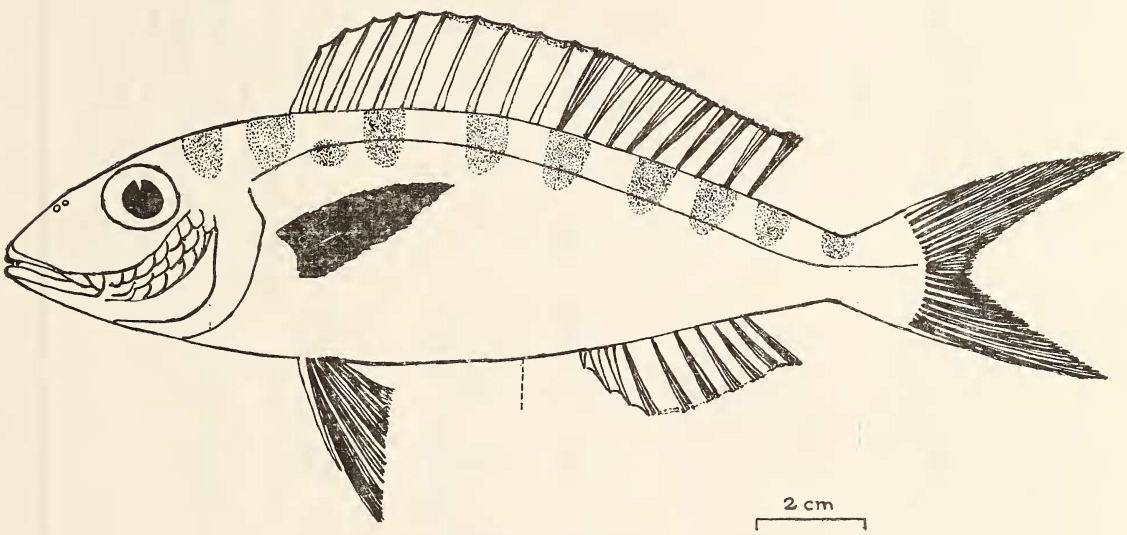


Fig. 1. *Nemipterus peronii* (Val.), 17.1 cm SL.

Body ovate and compressed. Depth of body at ventral origin 3.4-3.9 (3.7)* in SL, 4.3-4.8 (4.6) in TL. Head 3.2-3.4 (3.3) in SL, 4.0-4.3 (4.1) in TL. Snout larger than eye, 2.5-2.8 (2.6) in HL. Eye oblong, 3.2-3.7 (3.4) horizontally, 3.8-4.5 (4.2) vertically in HL. Interorbital space slightly convex, more or less equal to horizontal eye diameter. Postorbital 2.3-2.7 (2.5) in HL. Preorbital smooth, without scales. Suborbital wide, its posterior margin oblique, forming a straight

Gill membranes free from isthmus. Six stumpy gill-rakers present on lower half of first gill arch.

Dorsal origin just behind operculum. Dorsal spines not strong, pungent, membrane not emarginate, fourth highest, 2.4-2.6 in HL. Spinous portion slightly higher than soft ray portion. Dorsal base 0.5-0.6 (0.6) in HL. Anal origin just below second dorsal ray. First spine less than half the second, third longest. Spinous portion slightly lower than the soft

TABLE 1

TAXONOMIC CHARACTERS OF *N. peronii* FROM DIFFERENT LOCALITIES COMPARED WITH *N. tolu*

Characters	*Nemipterus peronii*			*Nemipterus tolu*
	Present collections	Wongratana (1970)	Weber and de Beaufort (1936)	
Depth of body in TL	4.3–4.8	—	4.0–4.5	3.8–4.6
Depth of body in SL	3.4–3.9	3.2–3.8	3.2–3.5	3.1–3.6
Head in TL	4.0–4.3	—	4.0–4.2	4.2–4.8
Head in SL	3.2–3.4	3.2–3.4	3.2–3.3	3.4–3.8
	3.2–3.7	3.3–3.4	3.1–3.7	2.9–3.0
Eye diameter in HL	equal to interorbital space which is slightly convex		equal to or slightly more than convex interorbital	slightly concave interorbital, 1.2-1.3 in eye
Maxillary	reaches just before the anterior edge of eye	extends to below front border of eye	reaches to below front border of eye	reaches to slightly beyond anterior margin of eye
Teeth	2-3 narrow bands of small pointed teeth in both jaws, with an outer row of caninoid teeth; 6 canines in each jaw.	villiform teeth in broad bandsiin jaws, larger and laterally; 5-6 canines at upper jaw symphysis	narrow bands of small pointed teeth in jaws, with an outer series of 14 caninoid teeth on both jaws; 6 canines in each jaw in front.	a few rows of conical teeth in anterior part of upper jaw; six curved canines in front of upper jaw only
Suborbital	suborbital wide, posterior margin oblique, forming a straight line, when produced, reaches anterior part of dorsal fin	suborbital not notched, finely rugose, less deep or slender and slightly curved upward postereodorsally	posterior angle of suborbital obtuse, hindborder oblique forming a straight line when produced reaches interior part of dorsal fin	posterior angle of suborbital obtuse and rounded, its hindborder forming a straight line when produced, reaches anterior part of dorsal
Preopercular flange	naked, with hindborder having no serrations	prepercle posterior edge entire	hindborder of preoperculum smooth or slightly crenulate	hindborder of preoperculum smooth
Squamation on head	begins between eyes just before posterior margin of eye	—	scales begin on head before hindborder of eye with an ill-defined temporal band of 4 scales	begins just before hindborder of eye

TABLE 1 (Contd.)

Dorsal spines	fourth highest, equal to postorbital part of head	fourth to sixth longest	second to fourth of equal length, slightly shorter than fifth to eighth, which are equal to postorbital	fourth to sixth spines longest, equal to eye and snout together
	interspinous membrane not emarginate	—	interspinous membrane between spines slightly emarginate	interspinous membrane deeply emarginate
Anal spines	first spine less than half the second, third longest	third spine slightly longer than second one	first about half as long as second, third longest, equal to eye diameter of shorter	first half length of second, third longest, equal to eye
	spinous portion lower than ray portion	—	soft anal rays longer than third spine	soft anal scarcely deeper than spinous portion
Coloration	head and body rosy, silvery shining on belly	head and body pale irridiscent pink, bright silvery beneath	preserved specimens — reddish above, silvery below with indications of broad yellow longitudinal bands on sides.	head and body rosy with silvery shining beneath
	nine pale pink blotches on the back, beginning in predorsal region	back with 9 ill-defined crossbands, first and second on predorsal region, last one on caudal peduncle	—	8-9 indistinct darker saddles on back, first one crossing nape, second before dorsal fin third to seventh below dorsal base, eighth to ninth on caudal peduncle
	dorsal margin from sixth spine to last ray yellowish	dorsal edge from sixth dorsal spine to tip of last ray pale yellow	—	dorsal edge with orange yellow

TABLE 1

TAXONOMIC CHARACTERS OF *N. peronii* FROM DIFFERENT LOCALITIES COMPARED WITH *N. tolu*

Characters	*Nemipterus peronii*			*Nemipterus tolu*
	Present collections	Wongratana (1970)	Weber and de Beaufort (1936)	
Depth of body in TL	4.3–4.8	—	4.0–4.5	3.8–4.6
Depth of body in SL	3.4–3.9	3.2–3.8	3.2–3.5	3.1–3.6
Head in TL	4.0–4.3	—	4.0–4.2	4.2–4.8
Head in SL	3.2–3.4	3.2–3.4	3.2–3.3	3.4–3.8
	3.2–3.7	3.3–3.4	3.1–3.7	2.9–3.0
Eye diameter in HL	equal to interorbital space which is slightly convex		equal to or slightly more than convex interorbital	slightly concave interorbital, 1.2-1.3 in eye
Maxillary	reaches just before the anterior edge of eye	extends to below front border of eye	reaches to below front border of eye	reaches to slightly beyond anterior margin of eye
Teeth	2-3 narrow bands of small pointed teeth in both jaws, with an outer row of caninoid teeth; 6 canines in each jaw.	villiform teetb in broad bandsiin jaws, larger and laterally; 5-6 canines at upper jaw symphysis	narrow bands of small pointed teeth in jaws, with an outer series of 14 caninoid teeth on both jaws; 6 canines in each jaw in front.	a few rows of conical teeth in anterior part of upper jaw; six curved canines in front of upper jaw only
Suborbital	suborbital wide, posterior margin oblique, forming a straight line, when produced, reacbes anterior part of dorsal fin	suborbital not notched, finely rugose, less deep or slender and slightly curved upward postereodorsally	posterior angle of suborbital obtuse, hindborder oblique forming a straight line when produced reaches interior part of dorsal fin	posterior angle of suborbital obtuse and rounded, its hindborder forming a straight line when produced, reacbes anterior part of dorsal
Preopercular flange	naked, with hindborder having no serrations	preperele posterior edge entire	hindborder of preoperculum smooth or slightly crenulate	hindborder of preopereulum smooth
Squamation on bead	begins between eyes just before posterior margin of eye	—	scales begin on head before hindborder of eye with an ill-defined temporal band of 4 scales	begins just before hindborder of eye

TABLE 1 (Contd.)

Dorsal spines	fourth higbest, equal to postorbital part of head	fourth to sixth longest	second to fourth of equal length, sligbtly shorter than fifth to eigbth, which are equal to postorbital	fourth to sixth spines longest, equal to eye and snout together
	interspinous membrane not emarginate	—	interspinous membrane between spines slightly emarginate	interspinous membrane deeply emarginate
Anal spines	first spine less than half the second, third longest	third spine slightly longer than second one	first about half as long as second, third longest, equal to eye diameter of shorter	first half length of second, third longest, equal to eye
	spinous portion lower than ray portion	—	soft anal rays longer than third spine	soft anal scarcely deeper than spinous portion
Coloration	head and body rosy, silvery shining on belly	head and body pale irridiscent pink, bright silvery beneath	preserved specimens — reddish above, silvery below with indications of broad yellow longitudinal bands on sides.	head and body rosy with silvery shining beneath
	nine pale pink blotches on the back, beginning in predorsal region	back with 9 ill-defined cross-bands, first and second on predorsal region, last one on caudal peduncle	—	8-9 indistinct darker saddles on back, first one crossing nape, second before dorsal fin third to seventh below dorsal base, eighth to ninth on caudal pedunele
	dorsal margin from sixtb spine to last ray yellowish	dorsal edge from sixth dorsal spine to tip of last ray pale yellow	—	dorsal edge with orange yellow